11/4/03 DRAFT

Fire Regime Condition Class (FRCC) Interagency Handbook
Reference Conditions

Modeler: Wendel Hann **Date:** 9/25/03 **PNVG Code:** DGRA2

Potential Natural Vegetation Group: Desert Grassland With Trees

Geographic Area: Interior Southwest (AZ, NM) and Southern Great Plains (W. TX)

Description: This type typically occurs in foothills where the plains transition to foothills and mountain landforms. Vegetation is grassland dominated by blue grama, tobosa grass, and galleta grass with intermingled forbs and half-shrubs. Within the natural disturbance and succession regime trees (pinyon, juniper, long needle pines) are a minor component (less than 5%) of this type, typically occurring on rock outcrops or edges of steep draws and ravines. However, if fire is substantially reduced or excluded trees will encroach and substantiallly increase.

Fire Regime Description: Fire regime group II, frequent replacement. The mean fire interval is about 10 years with high variation due to drought, which reduces fire frequency and moist periods that increase fire frequency. Grazing of the grassy fuels by large ungulate herds (buffalo) also substantially influenced fire mosaic pattterns in this type. This type typically burns during the late spring (May, June, early July) and fall (late September, October, November) in association with the hot, dry periods that follow the winter and late spring (December through April) rainy season and summer (late July, August, early September) monsoon season.

Vegetation Type and Structure of Fire Regime Group II

Class	Percent of Landscape	Description
A: post replacement	5	Dominated by resprouts of desert grassland species and post-fire associated forbs and half-shrubs. This type typically occurs where fires burn relatively hot in classes B, D, or E.
B: mid-development closed	25	Greater than 40 percent grasses and forbs; generally associated with productive soils on gentle slopes, flats, and mesa tops.
C: mid- open	67	Less than 40 percent grasses and forbs generally associated with gravelly and cobbly soils of the steeper more rugged slopes.
D: late- open	2	5-15 percent cover of mature pinyon, juniper,

		long needle pines, oaks, mahogany, mesquite, and other tree and tall shrub species; typically associated with rock outcrops or draws that protect the trees and tall shrubs from fire.
E: late- closed	1	Greater than 15 percent cover of pinyon, juniper, long needle pines, oaks, mahogany, mesquite, and other tree and tall shrub species; typically have multiple layers with young ingrowth and thick litter/duff accumulation; often associated with small areas that escape 1-3 fire cycles because of grazing patterns or terrain; typically occurs on the more productive soils; can become somewhat fire resistant as a result of dense shade over thick litter, but during dry years when this type burns it burns very hot.
Total	100	

Fire Frequency and Severity

Fire Frequency-Severity	Modeled Probability	Pct, All Fires	Description
Replacement Fire	.125	99	Replacement fires in B and C
Non-Replacement Fire	.001	1	Mosaic and surface fires in D and mosaic fires in C
All Fire Frequency*	.126	100	8 year mean fire frequency with high variation due to drought and large ungulate (buffalo) grazing influences

*Sum of replacement fire and non-replacement fire probabilities.

References

Brown, James K.; Smith, Jane Kapler, eds. 2000. Wildland fire in ecosystems: effects of fire on flora. Gen. Tech. Rep. RMRS-GTR-42-vol. 2. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 257 p.

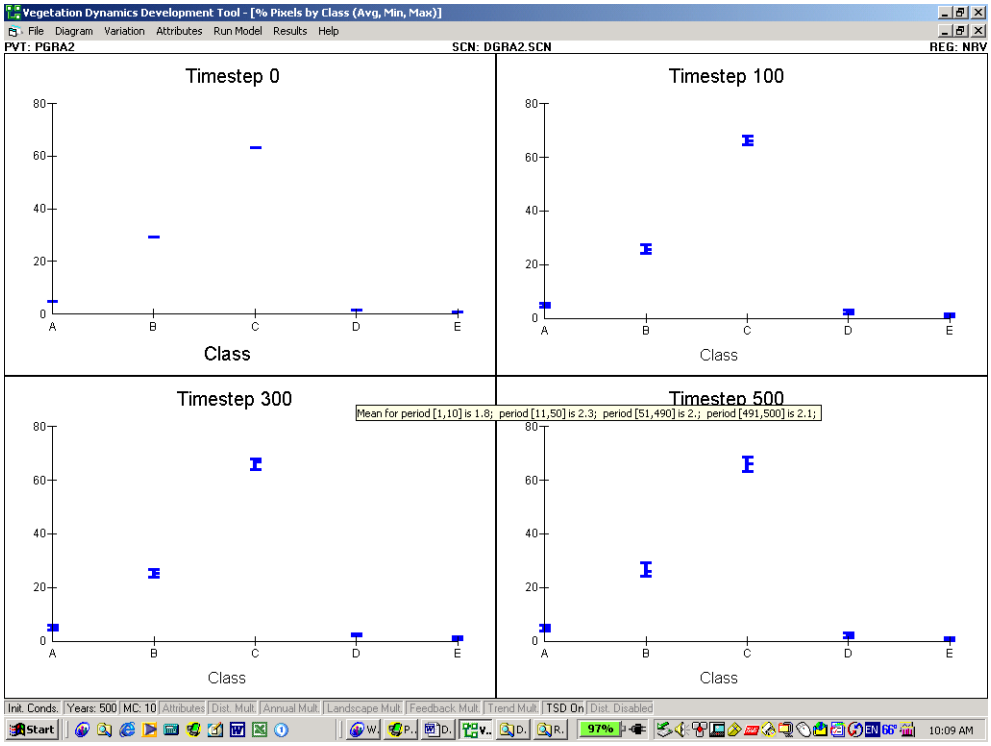
Kuchler, A. W. 1964. Manual to accompany the map of potential natural vegetation of the conterminous United States. American Geographical Society. Spec. Publ. No. 36. Lib. Congress Cat. Card Num. 64-15417. 156 p.

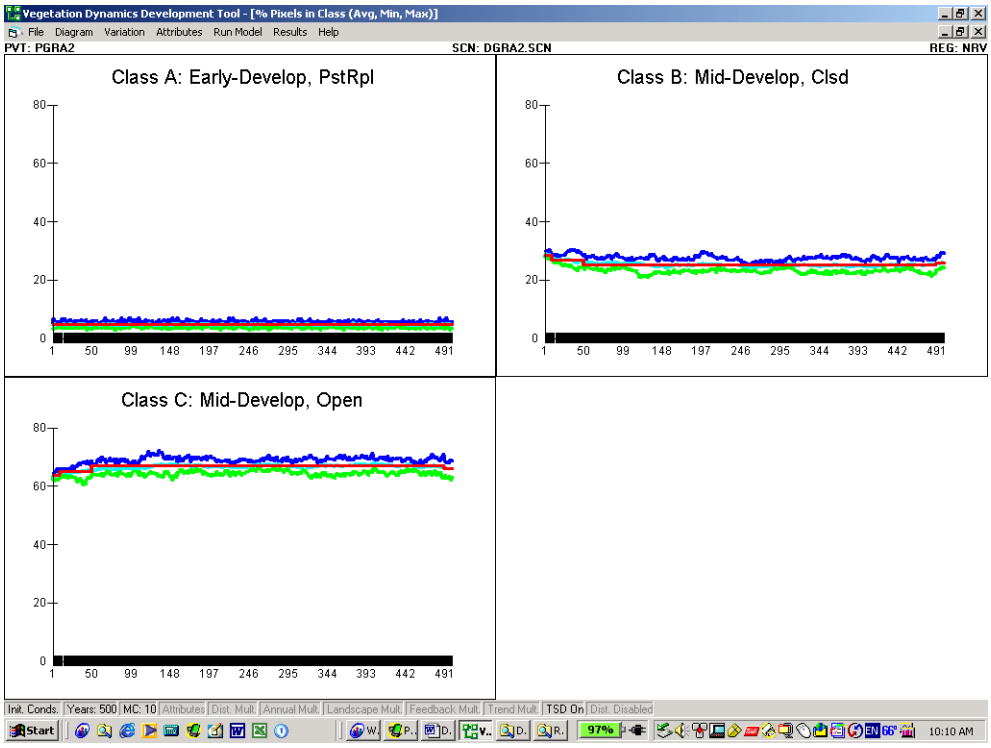
Schmidt, Kirsten M, Menakis, James P., Hardy, Colin C., Hann, Wendel J., Bunnell, David L. 2002. Development of coarse-scale spatial data for wildland fire and fuel management. Gen. Tech. Rep. RMRS-GTR-87. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 41 p. + CD.

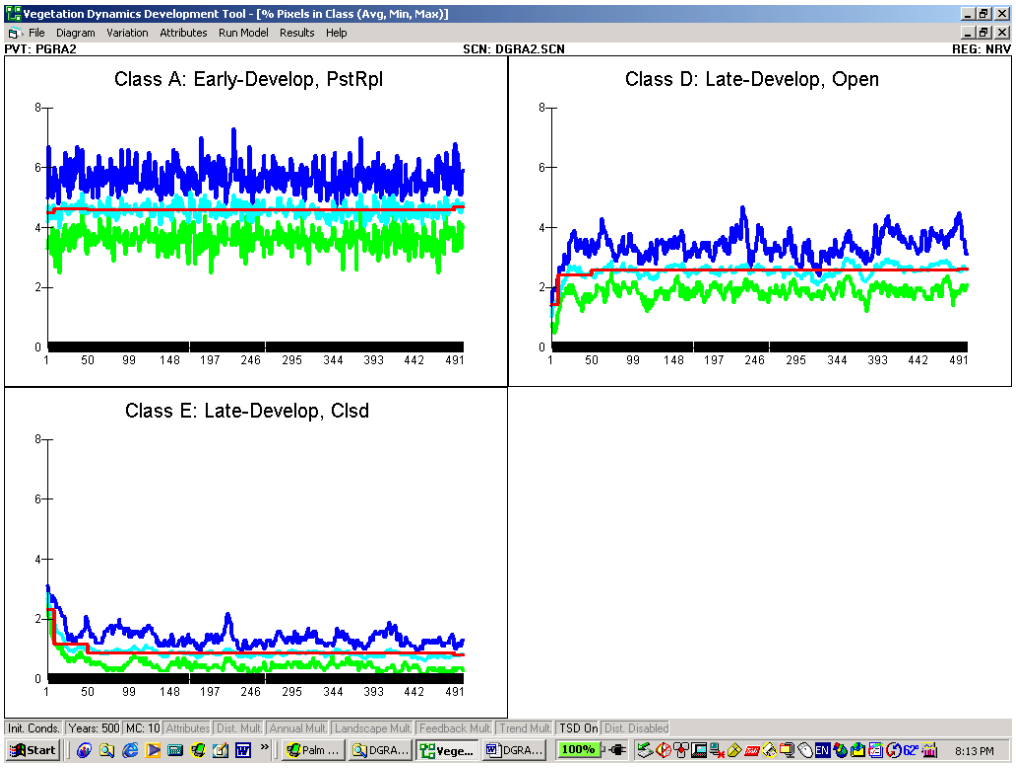
U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2002, December). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/.

MODELER FIELD REVIEWS: *SPECIFIC LOCATION?
Wendel Hann, West Texas 2001, New Mexico 2003.

VDDT Results






Vegetation Dynamics Development Tool - [% Pixels in Class (Avg, Min, Max)]
File Diagram Variation Attributes Run Model Results Help
PVT: PGRA2
SCN: DGRA2.SCN
REG: NRV
Class A: Early-Develop, PstRpl
Class D: Late-Develop, Open
Class E: Late-Develop, Clsd
0 2 4 6 8
1 50 99 148 197 246 295 344 393 442 491
Init. Conds. Years: 500 MC: 10 Attributes Dist. Mult. Annual Mult. Landscape Mult. Feedback Mult. Trend Mult. TSD On Dist. Disabled
Start
Palm ...
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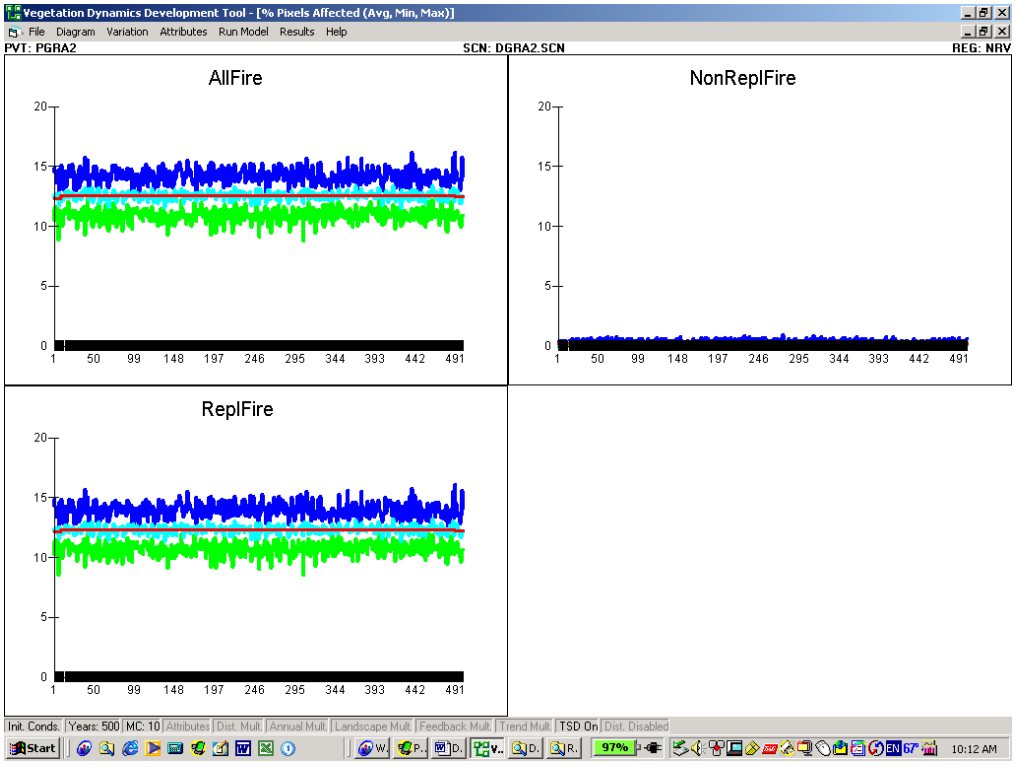
Vegetation Dynamics Development Tool - [% Pixels Affected (Avg, Min, Max)]
File Diagram Variation Attributes Run Model Results Help
PVT: PGRA2
SCN: DGRA2.SCN
REG: NRV
AllFire
NonReplFire
ReplFire
0 5 10 15 20
1 50 99 148 197 246 295 344 393 442 491
Init. Conds. Years: 500 MC: 10 Attributes Dist. Mult. Annual Mult. Landscape Mult. Feedback Mult. Trend Mult. TSD On Dist. Disabled
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